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ABSTRACT

This paper uses data from a project in South Carolina that provides services to children with severe emotional disturbance (SED) to examine the role of schools in integrated service delivery. This study examined organizations participating in a demonstration project sponsored by the federal Center for Mental Health Services and administered by a mental health center in an urban area of South Carolina. A systems-level assessment measured differences in development and coordination among service organizations in the demonstration site (n=61) and its comparison community (n=39). In the urban demonstration site, organizations serving children with SED were coordinated through a system of care model and featured multi-systemic therapy, an ecological treatment model. Results of the study indicate schools were important service providers for children with SED, but they were not always highly integrated within a larger system of child mental health services. School-based mental health counselors, however, played an important role in bringing schools into the system of care, primarily through increased client referrals. The presence of school-based mental health counselors was associated with more than twice as many client referrals and almost twice as many information exchanges from schools. (Contains 21 references.) (CR)

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# The Relationship of School-Based Services to Mental Health Networks

Authors

Introduction Method Results Discussion References

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## Introduction

Reforms including integration of children's mental health services have emerged in a variety of regions, communities, and institutions. Consequently, psychologists and other mental health professionals are increasingly interested in working with schools to provide better, integrated services (Carlson, Tharinger, Bricklin, DeMers, & Paavola, 1996; Paavola et al., 1996). To support these collaborations, it is important that child services professionals understand how schools relate to a network of care for children's mental health services.

This summary examines the role of schools in integrated service delivery using data from a project in South Carolina that provides services to children with severe emotional disturbance (SED). South Carolina presents an interesting case of state child service systems reform; beginning in 1989, it was one of the first states to develop Medicaid services utilizing local education agencies as medical providers. The Medicaid office and the Department of Education identified potentially reimbursable services, including psychological services. In July, 1995, the Medicaid agency was renamed the Department of Health and Human Services, and supported services for eligible children with a disability through an Individual Education Plan (IEP; Cantrell, 1996). These services were provided in the school building, using a strategy sometimes known as "push-in" integrated therapy. This contrasts with a strategy of "pull-out" clinical services, in which children needing services are removed from the classroom and school.

The involvement of schools in a network of care for children with SED is important for several reasons. Schools are potentially effective health delivery systems for children because they are stable, universal, and cost-effective (Carlson et al., 1996). To some extent, public schools have served to integrate children's social services since their inception (Fagin, 1992). Schools may work with families to

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ensure that their services are appropriate to both the family and the school's administration. In exceptional or special student education, an IEP that integrates services and service providers is essential to child health and family involvement in education (Duchnowski, Kutash, & Knitzer, 1995). Along with inpatient or residential services and mental health counseling, schools are a major axis of care and expense over time for children with emotional or behavioral problems (Epstein & Quinn, 1996).

Additionally, children with serious emotional or behavioral disorders often receive care from multiple service providers. Responsibility for care and health outcomes is shared, and the degree to which this shared responsibility is coordinated can be improved through system interventions (England & Cole, 1995; Friedman, 1996). Under these conditions, system coordination appears to be critical (Johnsen, Morrissey, & Calloway, in press). The degree of change in integration and coordination of child services may be measured using network analysis (Morrissey, 1992). In evaluations of service integration programs in upstate New York and western North Carolina, social network analysis demonstrated that service enhancements such as co-locating services and expanded case management, created greater systems integration (Morrissey, Johnsen, & Calloway, 1994).

In the context of a national mandate to establish systems of care for children (Stroul & Friedman, 1986), comprehensive care and full-service school models have become prominent (Dryfoos, 1994; Roberts, 1994). In terms of actual service use, research suggests that schools already provide a large proportion of mental health services for children and adolescents. In western North Carolina, the Great Smoky Mountain Study (GSMS) focused on representative 9-13 year olds attending public schools. In the GSMS, only 40% of children with SED received services. Of children with SED who received services, only half received them in the mental health sector (Burns et al., 1995). Mental health services in the education sector were reported for 71.5% of children with SED (vs. 41.5% who reported receiving services from community mental health providers). Earlier studies support the importance of school-based mental health services, identifying teachers as the professional group that most often serves children with mental health problems (Cohen et al., 1991; Offer, Howard, Schonert, & Ostrov, 1991).

## Method

How are schools involved in networks of care for children with SED? This study examined organizations participating in a mental health services demonstration sponsored by the federal Center for Mental Health Services (CMHS) and administered by a Community Mental Health Center in an urban area of South Carolina. A rural comparison region served three nearby counties. A systems-level assessments was designed to measure differences in development and coordination among service organizations in the demonstration site (n = 61) and its comparison community (n = 39). In the urban demonstration site, organizations serving children with SED were coordinated through a system of care model and featured multi-systemic therapy, an ecological treatment model (Henggeler & Bourdin, 1990; Henggeler et al., 1994). Baseline data were collected between December, 1994 and May, 1995. The sample of organizations in this study was unique because the sample was carefully designed to include a range of schools in the region. The project was funded for 5 years, and services began in March, 1994.

This study used an inter-organizational network survey based on Van de Ven and Ferry's "Organizational Assessment Instrument" which has been tested for validity and reliability (Morrissey, Johnsen, & Calloway, 1994; Van de Ven & Ferry, 1980). Researchers gathered responses from over 90% of 117 services identified in the two counties. Selected services were those which performed a CASSP function (Stroul & Friedman, 1986), were identified as a key agency, and/or were used by children with SED. The survey instrument included detailed indicators of client referral patterns and information exchange relationships among child serving agencies in the region.

The inter-organizational network of referral and communication among services for children with SED was summarized by indicators of social network structure, including connectedness, density, and centralization (Wasserman & Faust, 1994). Network analysis techniques provided the number and density of referral and communication ties to and from particular service providers. Analysis at the system level was complemented by analysis of schools in the network, including a comparison of those urban schools with and without in-school therapeutic intervention.

## Results

The network of service providers was moderately integrated in both the urban and rural regions, and more centralized in the rural region. The client referral patterns among 61 organizations in the urban service delivery network were more dense (18% vs. 13%) and less centralized (.26 vs. .43) than the 39-organization rural network (see Table 1). Density is a measure of the proportion of possible ties which

Density is a measure of the proportion of possible ties which are present, expressed as a proportion of non-zero cells in a n-by-n organizational matrix. Similarly, the information exchange patterns were more dense in the urban region (.23 vs. .18) and less centralized than those found in the rural area. This could have been due to a smaller student and client population in the rural network, requiring fewer relationships between services and allowing greater centralization of services. These findings also may have been related to greater integration in the urban region as a result of the early effects of the CMHS project.

Table 2 reports a Z-test for the difference between two proportions to compare the density of system ties and the connectivity of school ties for rural and urban systems. The urban density measures for referrals and information exchanges were significantly higher than rural measures ($p < .01$).

The "connectedness" of schools (the proportion of possible ties to or from schools to other system respondents) refers to the network density of relations involving particular schools but excluding the school district office.

Although the service system as a whole was more dense, urban region schools show a significantly lower degree of connectedness in terms of the proportion of services to which they send clients ($Z = 2.4$). In general, there were no significant differences in connectedness; schools exchanged clients and information with relatively few other services (one in ten, or less). The low connectedness measures were partially due to the fact that the school district office, which was central and highly connected with other services, was excluded from the analysis of school ties.

In order to examine the potential benefit of the demonstration, Table 3 compares urban schools with and without school-based counselors (SBCs). Proportionately, the urban system schools with SBCs sent clients to more than twice as many service providers as the schools without SBCs ($Z = 2.66$). Likewise, the schools with SBCs sent communications, proportionately, to almost twice as many other providers. This suggests that schools with SBCs may actively initiate relations with other services to a greater extent than those without SBCs. Most of the schools in the sample were elementary level, suggesting that urban region SBCs were most active in advocating for services for younger children with SED.

## Discussion

Schools are important service providers for children with SED, but they are not always highly integrated within a larger system of child mental health services. This summary described schools in two districts that were somewhat isolated from other providers in the local service system. School-based mental health counselors, however, played an important role in bringing schools into the system of care, primarily through increased client referrals. The presence of

primarily through increased client referrals. The presence of school-based mental health counselors was associated with more than twice as many client referrals and almost twice as many information exchanges from schools. Although the survey was conducted at an early point in a demonstration project, it suggests that school-based mental health counselors may increase the integration of schools with the larger system of care, building bridges of referral and information to better serve the needs of children.

Since the results reflect less than a year of intervention in one state, and since the comparisons were across services rather than over time, the full impact of school-based counselors cannot be fully assessed using these data. In addition, these results are limited to a single demonstration in a particular area and context. Future research should examine the role of schools in different regional contexts, and ensure that schools are included as respondents in surveys regarding the provision of mental health services for children. Families and counselors should be partners in both health and education, meeting needs of children in their most familiar environments. Bringing services into schools, in addition to referring children out to services, may improve both health and education, in addition to supporting the CASSP goal of providing services in the least restrictive environment.

As interventions are implemented, social network analysis can be used to measure the impact of the integration process and to evaluate the degree to which new service models help schools cooperate within a system of care. In addition, there is some evidence that school level (e.g., elementary vs. high school) is related to the degree of service integration, so developmental issues should be considered. Relationships between schools and other SED service providers may be identified and promoted when they serve the interests of children.

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